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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,234	03/01/2002	Ajay Kumar	5681-11700	6950

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EXAMINER	
HWANG, JOON H	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,234	KUMAR ET AL.	
	Examiner	Art Unit	
	Joon H. Hwang	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The applicants requested for reconsideration in the amendment received on 10/18/04.

The pending claims are 1-37.

Response to Arguments

2. Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4, 6-9, 17, 19, 20, 22-25, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of Bennett (U.S. Patent No. 5,734,909).

With respect to claim 1, Montero discloses a plurality of application servers, wherein each of the plurality of application servers is configured to access session data, wherein the session data represents the state of a client session for a client (fig. 1, abstract, section 11 on page 1, section 26 on pages 2-3, and section 36 on page 3). Montero discloses a common session database (a distributed store) comprising a primary state of the session data configured for access by the plurality of application servers and writes to the database controlled by a processing thread (fig. 1, section 35

on page 3, and section 40 on page 4). Montero does not explicitly disclose a locking management of the database. However, Bennett discloses a locking management on a resource of a central server in a shared resource distributed computing environment, wherein the resource of the central server is updated or synchronized with data from clients (abstract, line 15 in col. 1 thru line 30 in col. 2, and line 8 in col. 3 thru line 60 in col. 4). Bennett discloses the central server comprising a resource configured for access by the plurality of client nodes, wherein the central server is configured to provide locked access to the resource to a process executing within one of the plurality of the client nodes, wherein, while the resource is locked for the process, other processes cannot access the resource (line 8 in col. 3 thru line 60 in col. 4, and lines 4-20 in col. 7). Therefore, based on Montero in view of Bennett, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a resource locking mechanism of Bennett to the system of Montero in order to avoid data inconsistencies.

With respect to claim 2, Bennett teaches after the process has completed a current access of the resource (the primary state), the process is configured to hold locked access until after receiving a request to release the locked access (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 2 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 3, Bennett teaches the central server (the distributed store) is configured to request the process to release the locked access, wherein the process is configured to release the locked access in response to the request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 3 are rejected in the analysis of claim 2 above, and the claim is rejected on that basis.

With respect to claim 4, Bennett teaches the process is configured to release the locked access when the process no longer requires the locked access to the resource (the primary state, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 4 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 6, Bennett discloses the central server (the distributed store) is configured to grant the locked access to the process executing in one of the client nodes (the application servers) in response to a request for locked access from the process (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 6 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 7, Bennett discloses while the process holds the locked access, the central server (the distributed store) is configured to buffer one or more requests for locked access from one or more other processes executing within one or more of the plurality of client nodes (application servers, lines 58-65 in col. 1 line 54 in

col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 7 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 8, Bennett teaches if the process release the locked access to the resource (the primary state), the central server (the distributed store) is configured to provide locked access to one of the other processes in response to the other process's buffered request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 8 are rejected in the analysis of claim 7 above, and the claim is rejected on that basis.

With respect to claim 9, Bennett teaches another process executing within one of the plurality of client nodes (application servers) is configured to request locked access to the resource (the primary state) from the central server (the distributed store), and wherein if no process currently holds locked access to the resource, the central server is configured to provide locked access to the resource to the other process (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). Therefore, the limitations of claim 9 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claims 17, 20, and 31 are rejected in the analysis of claim 1 above, and these claims are rejected on that basis.

The limitations of claims 19 and 23 are rejected in the analysis of claim 4 above, and these claims are rejected on that basis.

The limitations of claims 22 and 32 are rejected in the analysis of claim 3 above, and these claims are rejected on that basis.

The limitations of claims 24 and 33 are rejected in the analysis of claim 7 above, and these claims are rejected on that basis.

The limitations of claim 25 and 34 are rejected in the analysis of claim 8 above, and these claims are rejected on that basis.

5. Claims 5, 10-16, 18, 21, 26-30, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of Bennett (U.S. Patent No. 5,734,909), and further in view of Bender et al. (US 2003/0163494 A1).

With respect to claim 5, Montero and Bennett disclose the claimed subject matter as discussed above except providing locked access to a thread within a process. However, Bender discloses the process is configured to provide locked access to at least a portion of a resource to a thread executing within the process, wherein, while the at least a portion of the resource is locked for the thread, other threads executing within the process cannot access the at least a portion of the resource (abstract, section 12 on page 12, sections 33-34 on page 3, sections 37-41 on page 4, and sections 43-45 on page 5). Therefore, based on Montero in view of Bennett, and further in view of Bender, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the thread-level locking mechanism of Bender to the system of Montero in order to avoid data inconsistencies.

With respect to claim 10, Montero discloses a plurality of application servers, wherein each of the plurality of application servers is configured to access session data, wherein the session data represents the state of a client session for a client (fig. 1, abstract, section 11 on page 1, section 26 on pages 2-3, and section 36 on page 3). Montero discloses a common session database (a distributed store) comprising a primary state of the session data configured for access by the plurality of application servers and writes to the database controlled by a processing thread (fig. 1, section 35 on page 3, and section 40 on page 4). Montero does not explicitly disclose a locking management of the database. However, Bennett discloses a locking management on a resource of a central server in a shared resource distributed computing environment, wherein the resource of the central server is updated or synchronized with data from clients (abstract, line 15 in col. 1 thru line 30 in col. 2, and line 8 in col. 3 thru line 60 in col. 4). Bennett discloses the resource configured for access by the plurality of client nodes, wherein the resource is configured to provide locked access to a process executing within one of the plurality of the client nodes, wherein, while the resource is locked for the process, other processes cannot access the resource (line 8 in col. 3 thru line 60 in col. 4, and lines 4-20 in col. 7). Therefore, based on Montero in view of Bennett, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a resource locking mechanism of Bennett to the system of Montero in order to avoid data inconsistencies. Montero and Bennett do not explicitly disclose providing locked access to a thread within a process. However, Bender discloses the process is configured to provide locked access to portions of a resource to

one or more threads executing within the process, wherein, while a portion of the resource is locked for one of the threads, other threads executing within the process cannot access the portion of the resource (abstract, section 12 on page 12, sections 33-34 on page 3, sections 37-41 on page 4, and sections 43-45 on page 5). Therefore, based on Montero in view of Bennett, and further in view of Bender, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the thread-level locking mechanism of Bender to the system of Montero in order to avoid data inconsistencies.

With respect to claim 11, Bennett teaches after the process has completed a current access of the resource (the primary state), the process is configured to hold locked access until after receiving a request to release the locked access (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8).

With respect to claim 12, Bennett teaches the central server (the distributed store) is configured to request the process to release the locked access, wherein the process is configured to release the locked access in response to the request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8).

With respect to claim 13, Bennett discloses the central server (the distributed store) is configured to grant the locked access to the process executing in one of

the client nodes (the application servers) in response to a request for locked access from the process (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8).

With respect to claim 14, Bennett discloses while the process holds the locked access, the central server (the distributed store) is configured to buffer one or more requests for locked access from one or more other processes executing within one or more of the plurality of client nodes (application servers, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8).

With respect to claim 15, Bennett teaches if the process release the locked access to the resource (the primary state), the central server (the distributed store) is configured to provide locked access to one of the other processes in response to the other process's buffered request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8).

With respect to claim 16, Bennett teaches another process executing within one of the plurality of client nodes (application servers) is configured to request locked access to the resource (the primary state) from the central server (the distributed store), and wherein if no process currently holds locked access to the resource, the central server is configured to provide locked access to the resource to the other process (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8).

The limitations of claims 18 and 21 are rejected in the analysis of claim 5 above, and these claims are rejected on that basis.

The limitations of claims 26 and 35 are rejected in the analysis of claim 10 above, and these claims are rejected on that basis.

The limitations of claim 27 and 36 are rejected in the analysis of claim 12 above, and these claims are rejected on that basis.

With respect to claim 28, Bennett teaches the process is configured to release the locked access when the process no longer requires the locked access to the resource (the primary state, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8).

The limitations of claim 29 are rejected in the analysis of claim 14 above, and the claim is rejected on that basis.

The limitations of claim 30 are rejected in the analysis of claim 15 above, and the claim is rejected on that basis.

With respect to claim 37, Bennett teaches the process is configured to release the locked access when the process no longer requires the locked access to the resource (the primary state, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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4/5/05

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PRIMARY EXAMINER